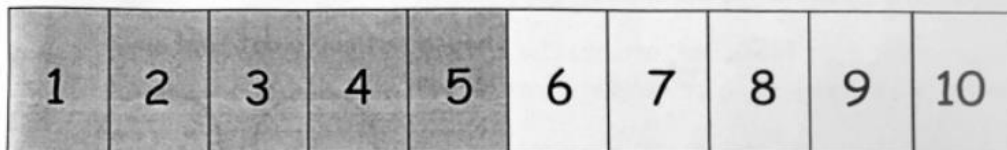


Module 1: Section 1D: Connecting with the Content: Kindergarten Sample Tasks

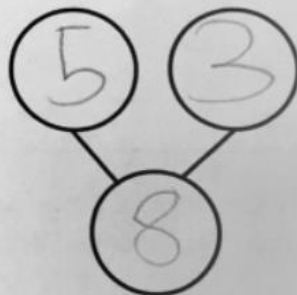
Task 1:

Listen to each story. Show the story with your fingers on the number path. Then, fill in the number sentence and number bond.



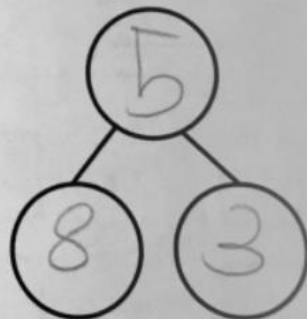
Joey had 5 pennies. He found 3 pennies in the couch. How many pennies does Joey have now?

$$\underline{5} + \underline{3} = \underline{8}$$



Joey gave the 3 pennies to his dad. How many pennies does Joey have now?

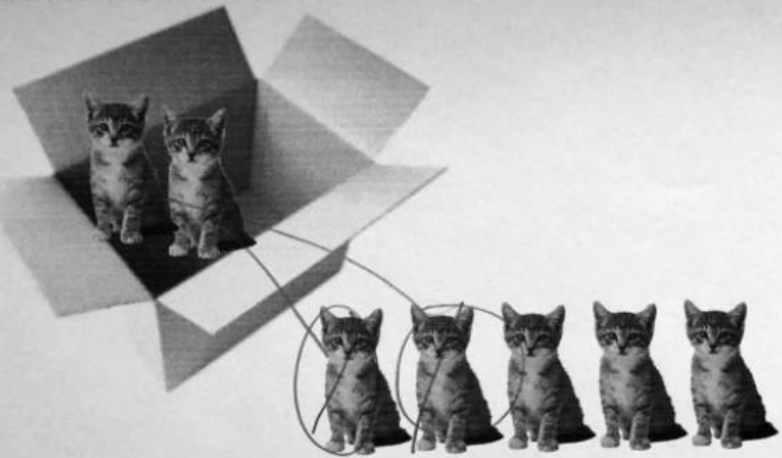
$$\underline{8} - \underline{3} = \underline{5}$$



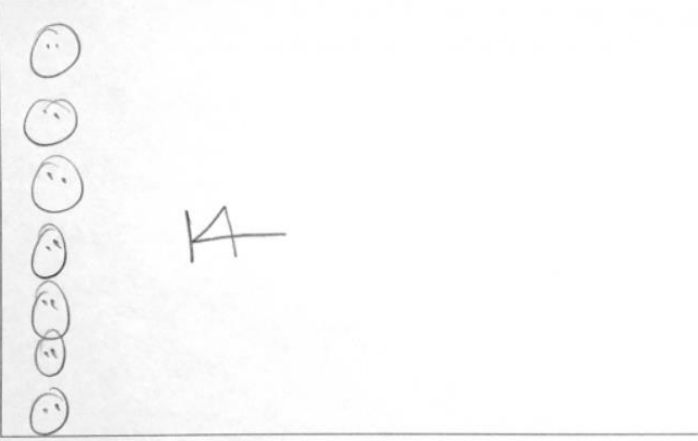

Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Task 2:

1. Five cats on the outside of the box. Two cats in the box. How many more cats are outside of the box than in the box?


$$5 - 2 = 3$$

2. Seven cats. How many eyes in all?



Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Task 3:

Name: _____

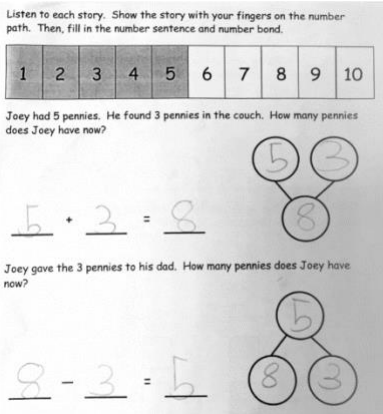
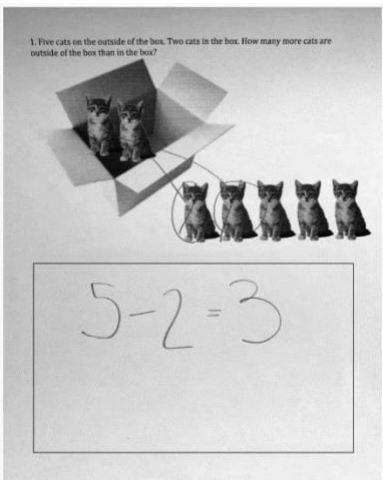
17 seventeen hearts



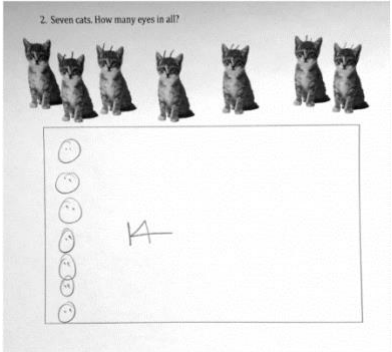

Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Module 1: Section 1D: A Closer Look at the Standards for Mathematical Content: Kindergarten Sample Tasks

Participant Guide

Student Work Sample	Standard of Mathematical Content Focus	Degree of Alignment	Standards of Mathematical Practice (SMP) Focus
<p>Sample Task 1:</p> <p>Listen to each story. Show the story with your fingers on the number path. Then, fill in the number sentence and number bond.</p> 	<p>Can you identify the targeted content standard(s) for this task?</p>	<ul style="list-style-type: none"> • None/Weak • Partial • Strong 	<p>Can you identify the targeted practice standard(s) for this task?</p>
<p>Sample Task 2: (cont on p.2)</p> 	<p>Can you identify the targeted content standard(s) for this task?</p>	<ul style="list-style-type: none"> • None/Weak • Partial • Strong 	<p>Can you identify the targeted practice standard(s) for this task?</p>

Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Student Work Sample	Standard of Mathematical Content Focus	Degree of Alignment	Standards of Mathematical Practice (SMP) Focus
			
<p>Sample Task 3:</p> 	<p>Can you identify the targeted content standard(s) for this task?</p>	<ul style="list-style-type: none"> • None/Weak • Partial • Strong 	<p>Can you identify the targeted practice standard(s) for this task?</p>

Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Module 1: Section 1D: A Closer Look at the Standards for Mathematical Content: Kindergarten Sample Tasks

Facilitator's Guide

Throughout facilitation of this activity it will be important to remind participants:

- Use the grade-level overview to determine the relevant cluster(s) to look at more closely
- Questions regarding Standards for Mathematical Practices will only be indicated where specific practices were identified within the source of the task alignment. Additionally, emphasize to participants the statement at the end of each cluster within the *KAS for Mathematics*, “The identified mathematical practices, coherence connections, and clarifications are possible suggestions; however, they are not the only pathways.”

Sample Task 1:

This assignment is **strongly aligned** to the standards.

OVERVIEW

Kindergarten students write equations and number bonds to represent two addition and subtraction problems. This assignment is strong because it builds students' conceptual understanding of addition and subtraction and how both operations can be represented in multiple ways.

RELATED STANDARDS

KY.K.OA.1: Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

WHY IS THIS ASSIGNMENT STRONGLY ALIGNED?

This assignment is well-aligned with **KY.K.OA.1** which requires students to represent addition and subtraction in a variety of ways, including symbolic representations such as expressions and equations. In this assignment, students have to represent one addition and one subtraction problem symbolically in two ways: equations and number bonds. The numbers used in both problems ($5+3=8$ and $8-3=5$) are appropriate, because kindergarten standards require students to add and subtract within 10. The methods for adding (counting all) and subtracting (taking away) are also appropriate for kindergarten; more complex methods, such as finding an unknown addend, are more appropriate for first grade.

This assignment builds students' conceptual understanding of addition and subtraction. Kindergarten students begin learning what addition and subtraction represent by acting them out in concrete ways, such as using fingers or other objects to add and subtract, and they also learn that addition and subtraction can be represented symbolically using mathematical language such as equations. Number bonds are another symbolic representation that help students grasp the concepts of addition and subtraction by visualizing the relationship of parts to a whole.

Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Sample Task 2:

This assignment is **partially aligned** to the standards.

OVERVIEW

Kindergarten students complete two addition and subtraction word problems about cats. This assignment gives students a chance to model real-world situations mathematically, but only one of the two problems is well-aligned with a kindergarten standard.

RELATED STANDARDS

KY.K.CC.5: Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

KY.K.OA.2: Solve addition and subtraction word problems and add and subtract within 10 by using objects or drawings to represent the problem.

WHY IS THIS ASSIGNMENT PARTIALLY ALIGNED?

The assignment includes one problem that is well-aligned with a kindergarten standard and one problem that isn't.

The first problem, in which students solve a "how many more?" subtraction word problem, is well aligned with **KY.K.OA.2**. The number types (5-2) and representations (pictures of cats) are appropriate because the standard requires subtracting within 10 using visual representations.

The second problem, in which students count the number of total eyes for seven cats, is not well aligned with **KY.K.CC.5**. The number of objects (14) is appropriate, but the standard also specifies that when counting 11-20 objects, the objects should be arranged in an organized way (a line, array, or circle) to help students grasp one-to-one correspondence. In this assignment, the objects (cats' eyes) are arranged in a scattered configuration, which—according to the standard—should be reserved for counting less than 11 objects. And because students are counting pairs of eyes, there is an implicit focus on counting by 2s, which is above grade level for kindergarten (as standard **KY.K.CC.1** only requires that Kindergarten students count by 1s, 10s and count backwards from 30 by ones).

KY.K.CC.5 focuses on the procedural skill of counting within 20, and the second problem requires that students count to 14. However, Kindergarten students should be practicing the procedural skill of counting between 11-20 objects arranged in a line, circle, or array (not in a scattered configuration, as students do in this assignment). **KY.K.OA.2** focuses on the application of addition and subtraction to the real world, and the first problem requires students to subtract within the real-world context of number of cats in boxes.

Practice Standards

This assignment allows students to engage with two mathematical practice standards. Interpreting what the word problem is asking students to do in the first problem gives students the chance to engage with **Mathematical Practice Standard #1** ("Make sense of problems and persevere in solving them"). Representing the real-world topic in both problems (number of cats and number of eyes) symbolically with written numerals gives students the chance to engage with **Mathematical Practice Standard #4** ("Model with mathematics").

Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Sample Task 3:

This assignment is **weakly aligned** to the standards.

OVERVIEW

Kindergarten students color in 17 hearts and trace the numeral 17. This assignment is weak because it only requires students to color and trace; students do not actually have to count anything or write any numerals independently.

RELATED STANDARDS

KY.K.CC.3: Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

KY.K.CC.5: Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

WHY IS THIS ASSIGNMENT WEAKLY ALIGNED?

The assignment is not well aligned with either of the target standards:

KY.K.CC.3 requires students to write numerals from 0 to 20 and represent a set of objects with the corresponding numeral. In this assignment, students were not required to write the numeral 17 independently and there is no evidence that they were prompted to connect the numeral 17 with the number of hearts on the worksheet.

KY.K.CC.5 requires students to count up to 20 objects, with larger numbers of objects arranged in an organized way (a line, array, or circle) to help students grasp one-to-one correspondence, the understanding that one number represents one object being counted. In this assignment, the number of objects (17) is appropriate, but the objects are not organized as the standard requires (as scattered configurations of objects, such as the hearts in the assignment, should be reserved for counting fewer than 11 objects). There also isn't evidence that students actually had to count the objects at all; the assignment title states that there are 17 hearts and students could color them in without making any connection to counting.

This assignment doesn't help students build conceptual understanding, which is required by **KY.K.CC.3**. Kindergarten students are just beginning to learn the foundational concept that a set of objects can be represented symbolically with a written numeral. Assignments that ask students to count objects and write numerals should explicitly make that connection (for example, by having students count the amounts of objects in multiple sets and independently write the corresponding numerals).

* Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.

Please note that inclusion of these sample tasks does not represent that this task is endorsed by or rejected by the Kentucky Department of Education. Inclusion of these tasks was for the sole purpose of allowing participants the opportunity to investigate the content standards within the *Kentucky Academic Standards for Mathematics* more closely. All tasks were selected from <https://tntp.org/student-work-library>.